DOCUMENT RESUME

ED 371 709 IR 016 615

TITLE	State Plan for Technology for the State Board of Education of Ohio.
INSTITUTION	Ohio State Dept. of Education, Columbus.
PUB DATE	9 Nov 92
NOTE	19p.
PUB TYPE	Reports - Evaluative/Feasibility (142)
EDRS PRICE	MF01/PC01 Plus Postage.
DESCRIPTORS	*Curriculum Development; Educational Change; Educational Environment; Educational Improvement; Educational Objectives; *Educational Technology; Elementary Secondary Education; Learning; Policy Formation; Professional Development; *Public Policy; Resource Allocation; *School Role; *State Programs; Statewide Planning; *Technological Advancement
IDENTIFIERS	*Ohio State Board of Education

ABSTRACT

The state plan for educational technology in Ohio has been developed to facilitate a basic understanding of the broad scope of technology and how it can affect learning positively. It is also intended to provide a framework for policy and resource allocation decision making. Massive systemic changes in curriculum, professional development, and governance are vital if young people are to have the opportunity to become knowledgeable workers in the global information age. Educators must provide the will, the intelligence, and the way. Schools should be changed into technological environments, but unless there is commitment from the staff, the changes will be useless. Instructional goals are as follows: (1) enhance the teaching and learning process with a variety of technologies; (2) enhance the learning environment to support teachers, adapt to changing curricula, and facilitate interdisciplinary curricula; (3) integrate technology through the curriculum; (4) extend the boundaries of the learning environment; and (5) assess the impact of technology on learning. Specific measurable objectives are defined for these goals. The plan includes goals for professional development and some general guidelines for assessment and evaluation. (SLD)

****
* Reproductions supplied by EDRS are the best that can be made *
* from the original document. *
****

U.S. DEPARTMENT OF EDUCATION
Office of Educational Research and Improvement
EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)

☐ This document has been reproduced as received from the person or organization originating it.

☐ Minor changes have been made to improve reproduction quality.

• Points of view or opinions stated in this document do not necessarily represent official OERI position or policy.

ED 371 709

STATE PLAN FOR TECHNOLOGY

FOR THE

STATE BOARD OF EDU CATION

OF OHIO

NOVEMBER 9, 1992

IR016915

"PERMISSION TO REPRODUCE THIS MATERIAL HAS BEEN GRANTED BY

T. Sanders

TO THE EDUCATIONAL RESOURCES INFORMATION CENTER (ERIC)."

BEST COPY AVAILABLE

STATE PLAN FOR TECHNOLOGY
ADVISORY COMMITTEE

Ron Abate, Cleveland State University
Duane Baker, Northwest Ohio Computer Association
Jay Barkey, Wilmington City Schools
Edward Bischoff, Ohio Society of Professional Engineers
Jim Boyd, Butler County Joint Vocational School District
Bill Bucey, Southern High School
David Costello, Canfield Local Schools
Barbara Cucciarre, Magnificat School
Suzanne Damarin, The Ohio State University
Richard Denoyer, Princeton City Schools
Patrick Fitzgerald, WBGU-TV
Dave Fornshell, Ohio Educational Broadcasting Network Commission
Sue Gatton, Cuyahoa Falls City Schools
Fred Goldberg, NASA Lewis Research Center
Charles Gossett, Franklin City Schools
Ralph Gutowski, Miami University
Rebecca Haniotos, Linden Park Alternative Elementary School
Fred Harner, Educational Technology Services
Ray Hicks, Ohio School Boards Association
Curt Hinds, Stark County Schools
Joe Hofmeister, Cincinnati Country Day School
Brenda Hollensen, Cuyahoga County Joint Vocational School
Tony Marshalek, Northeast Ohio Instructional Media Center
Catherine Milligan, Fairfield City Schools
Margaret Orazen, Cleveland City Schools
James Orchard, West Holmes Local Schools
Jane Pratt, Columbus City Schools
Richard Rucker, Dayton City Schools
Larry Shaffer, South Vienna Elementary School
Sr. Mary Theresa Sharp, Notre Dame Educational Center
John Simpkins, Bauelle Memorial Institute
Steve Snyder, Lighthouse Education Enhancement Project
Julie Todd, Central Ohio Special Education Regional Research Center
Ron Vidmar, Ohio Department of Administrative Services
Roy Vivian, Swanton Local Schools

OHIO DEPARTMENT OF EDUCATION
TECHNOLOGY TASK FORCE

Ted Sanders, Superintendent of Public Instruction
John Goff, Deputy Superintendent
Irene Bandy-Hedden, Assistant Superintendent, Chair
Matthew Cohen, Director, Policy Research and Analysis
Nancy Eberhart, Director, Curriculum, Instruction and Professional Development
Hazel Flowers, Director, Equal Educational Opportunities
Margaret Kasten, Mathematics Consultant. Curriculum, Instruction and Professional Development
Gene Miltko, Director, Computer Services and Statistical Reports
Spencer Northup, Instructional Television Consultant, Curriculum, Instruction, and Professional Development
Darrell Parks, Director, Vocational and Career Education
Frank Schiraldi, Assistant Director, Curriculum, Instruction, and Professional Development

Foreward

The State Board of Education is determined to provide children of Ohio with new opportunities and new tools to acquire skills needed by twenty-first century adults. This necessitates moving toward a performance-based curriculm and many changes in how schools operate and how teaching and learning take place. New schooling models, such as Ohio's Classroom of the Future, emphasize a greater degree of independent and small group learning facilitated through the use of computers and other technology.

In its broadest sense, technology refers to the system by which a society provides its members with those things needed or desired. The use of technology in education, with respect to increasing productivity and output by augmenting the effects of human effort and by changing the productive process, must be as effective as it has been in business. This state plan for educational technology was developed with these considerations in mind. It is intended to facilitate a basic understanding of the broad scope of technology and how it can positively affect learning.

The plan is also intended to provide a framework for policy and resource allocation decision making. As we proceed with our efforts to provide leadership in improving education, the need for systemic change becomes increasingly clear. Such change necessarily involves expanding the arena of educational leadership to include government, business, and community participation. It is vital, therefore, that this plan be understood to be dynamic in nature, providing for the flexibility and growth essential in all matters dealing with technology.

The plan also addresses the need for assessment and accountability in the ways that are both formative and summative. If our investment in educational technology is to be cost effective, a concerted effort must be made to revise the organization and operation of schools to enable technology to become the knowledge tool to empower teachers and learners to create dynamic learning environments. The effectiveness of the plan should be judged by its potential and actual contribution to those ends.

There are many people, too numerous to acknowledge individually, who contributed to the knowledge bases reflected in this plan. This plan could not have been developed without the many organizations and individuals who supported the participation of those on the Advisory Committee. Their generosity is acknowledged and appreciated. Finally, special thanks to the members of the Advisory Committee who devoted much time and energy to the production of this plan. We hope they find their efforts at least in part repaid by this report.

Preface

In its Strategic Plan, the State Board of Education clearly articulates its mission for education in Ohio:

> The mission of education is to prepare students of all ages to meet, to the best of their abilities, the academic, social, civic, and employment needs of the 21st century, by providing high-quality programs which emphasize the lifelong skills neccessary to continue learning, communicate clearly, solve problems, use information and technology effectively, and enjoy productive employment.

Recognizing that effective use of technology is vital to the accomplishment of this mission, the State Technology Advisory Committee was established to formulate the neccessary goals, objectives, and strategies. The committee was guided in its task by the belief that:

> Technology should empower educators and students to more efficiently and effectively manage and create productive learning environments.
>
> Technology, appropriately applied, can improve information and data management for decision making related to the educational enterprise; enhance student learning; enhance teacher efficiency and creativity; facilitate involvement and communication between and among administrators, teachers, students, parents and the community; accommodate individual student learning types and needs; and interact with and change the content of the curriculum.

The report that follows reflects this philosophical perspective through specific direction for state leadership in technology-enhanced curriculum and professional development, as well as for the management, operations, and accountability of the educational enterprise.

Introduction

In times of change, the learners inherit the earth; while the learned find themselves beautifully equipped to deal with a world that no longer exists.

-Eric Hoffer

By the time a child is born today is fifty years old, the amount of information that exists will be thirty-two times as great as today, and during that individual's lifetime, 97% of all information ever known will be generated. Every month NASA accumulates new information equal to the entire contents of the Library of Congress. Youngsters educated to cope with the agrarian society of the 19th century and with the industrial world of the early 20th century will not be prepared for an age of information.

Massive and systemic changes in curriculum, professional development, and governance are vital if our young are to have the opportunities they deserve to become knowledge workers in the global information age. Educators must provide the will, the intelligence, and the way. An established technological infrastructure can provide the catalyst necessary for such systemic change in education. Anything less will simply automatize the existing system. If public education is to belong to the contemporary world, teaching skills needed in the twenty-first century, we must seize the opportunity and challenge to tranform it into a vehicle capable of preparing learners to have the responsibility, initiative, and flexibility to create productive lives.

Educators must provide the will, the intelligence and the way.

The wave of technology that is directly sweeping society is directly related to the need to revise and modernize the curriculum. As technological advances change how people live, they also change how and what people must learn in order to thrive. This requires a major shift from predetermined notions about what is to be taught and learned. Opportunities must be provided for learners to extend and enhance their creative, physical, linguistic and quantitative abilities. Technology must be put to use in multiple ways for many purposes. With technology, teachers should be able to take a flexible, more innovative approach to their teaching.

As technological advances change how people live, they also change how and what people must learn in order to thrive.

Technology enables learners to make their own products, and through project-based learning, to engage actively and expansively with the technology. More importantly, this active and expansive interaction extends to the material and topics they are learning. In short, the effects of technology are greatest on learning when teachers help students use the technology to construct their own knowledge rather than use it as one more way of delivering information from the front of the room.

Professional development is the most important vehicle for integrating current technologies into educational programs. With the proliferation of new technologies, there is an increasing need for all educators to understand not only the mechanics of the materials and equipment, but the assumptions implicit in their use. If educators lack this understanding, the new technologies may become ends in themselves. Unless there is a commitment from staff to use various technologies to restructure the learning environment, all the technology in the world will not make a difference. It is people who will determine whether the technology revolution, impacting every aspect of modern life, catches on in schools.

Unless there is a commitment from staff to use various technologies to restructure the learning environment, all the technology in the world will not make a difference.

Training in the effective instructional use of technology requires extended periods of time and a commitment to use technology to enhance the learning environment of students. What teachers do with various technologies in their classrooms reflects how much experience they have had with technology to engage their students in the learning process, a psychic payoff by means of personal and professional gratification.

School leaders, concerned with management and operations, e.g., accountability and planning, must have one thought uppermost at all times. Unless every decision is made with the welfare of learners (clients) in mind, technology is worthless and instructional changes will be for naught. Convenience, habit, and even tradition should not be the basis for decisions relative to technology. Decisions ought not be based on what is easiest to control and administer.

Unless every decision is made with the welfare of learners (clients) in mind, technology is worthless and instructional changes will be for naught.

Every technological tool should be used to relegate routine, time-consuming clerical tasks to the background, and allow more time and energy for developing roles as instructional facilitators and leaders. Planning for the effective use of the educational technology has the power to enhance the instructional program, improve academic achievement, and create more efficient and productive classroom and work environments. Technology has had a profound effect on the workplace and in education. Planned and cost effective use of technology is of significant importance. Schools should be changed into technological environments that allow more mind-on-task time for both teachers and learners, and create environments that empower learners to become independent. Flexibility is essential if change is to be accomplished easily, and flexibility procedures are no more important than flexible minds.

Schools should be changed into technological environments that allow more mind-on-task time for both teachers and learners, and create environments that empower learners to become independent.

ACCOUNTABILITY AND DECISION-MAKING GOALS AND OBJECTIVES

Public accountability and decision making for effective schools are two sides of the same coin. Good public policy demands reliable information in order for society to make informed decisions about teaching and learning. Likewise, decision makers within the school require constant data to provide an effective learning environment. As the social and economic impacts of educational outcomes on all citizens grow, so do the political demands for accountability. As education becomes more organizationally complex, so do the data that describes it.

The components remain simple. Education is fundamentally a process that must focus on each individual child. Its organization involves individuals performing varied tasks culminating in activity in each individual classroom. But if the basic data remain simple, the system has become so large and complex that it is easy to lose sight of the basic components. Indeed, size and complexity tend to remove administration and policy from the realities of the classroom.

The public must receive sufficient detail of what is happening in education without creating unnecessary reporting burdens on those who must make the system work. Likewise, those directly responsible for assuring an effective educational process must have data about the system without losing sight of the pre-eminence of the needs of the individual learner.

The technological advances in communications, data processing and systems management provide the tools for education to meet its accountability and organizational goal effectively without diverting excessive resources from the classroom. In turn, educational accountability and decision making incorporate techniques that appropriately utilize these advances. Education administration is a tool to accomplish learning goals. Given the high stakes nature of educational outcomes, accountability is a tool to link the education system with its constituents. Either way, the goal pursued here must facilitate the learning process and not become ends in themselves.

Educational accountability and decision making will incorporate appropriate use of technology, which includes the protection of the privacy rights of individuals, that address:

- The high priority demands from all stakeholders for information about student learning outcomes, the cost and benefits of education programs, and the relationship between

schooling and the larger social environment.

- Organizational needs to support learning, including useful communications, coordination with instructional applications, and easy access to information.

OBJECTIVE 1: By 1994, establish a flexible system of reporting that can meet local, state and national accountability requirements and provides for the protection of the rights of individuals under the law.

OBJECTIVE 2: By 1994, have in operation an integrated and policy relevant management information system.

OBJECTIVE 3: By 1995, decision oriented management system in schools will be accessible to provide appropriate, lawful information to all education professionals.

INSTRUCTIONAL GOALS, OBJECTIVES, AND STRATEGIES

The impact of technology on society has become so fundamental and pervasive as to have dramatically changed its very nature. As the new millennium approaches, there has not been a correspondingly dramatic technological impact in education. This is not to suggest that technology in ever increasing quantity and variety is not present and even used instructionally in our schools. Quite the contrary, it is to suggest that frequently the use of technology in schools is limited to improving and enhancing the information delivery/test preparation business, rather than to help everyone become active, independent learners. We are thus provided with a basic understanding of how the day-to-day professional culture of education differs with the mainstream society. Our enterprise is far removed from the world for which we are preparing our young.

Fundamental change in what we think learners need to know and how they learn it must be reflected in classroom technologies if we are to prepare our children to engage the powerful forces shaping the future landscape. In order for technology to have the positive dramatic impact on education that it already had on the larger society, we must take advantage of the expanding knowledge bases about how people learn and how workers best function in organizations such as schools. A comprehensive understanding of the role of instructional technology necessitates accepting as valid, complimentary, and imperative for the enterprise, technology as an intellectual tool, useful for creating, exploring, interpreting, generalizing, constructing, and reasoning.

At the core, this acceptance validates the need to re-examine everything we know about teaching and learning from the perspective that the pervasiveness of some technologies expands and alters the very nature of the knowledge, skills, and attitudes that will be vital in the emerging future. The interaction of these technologies with human thinking make them completely unlike any other resource that has ever been used in teaching/learning endeavors. It is vital, therefore, that technology be used to improve both what is taught and learned, and how it is taught and learned. The following goals provide a clear and direct path to achieving these ends.

INSTRUCTIONAL GOALS

The nature and application of technology in instruction should:

1. Enhance the teaching/learning process with a wide variety of technologies for all students and teachers regardless of gender, race, ethnicity, socioeconomic status, mental or physical limitations, geographic location, or national origin by assuring access to a variety of technologies.

2. Enhance the learning environment to
   - -support teachers as facilitators of the teaching/learning process.
   - -more easily adapt to changing curriculum objectives.
   - -facilitate the implementation of interdisciplinary curriculum.

3. Integrate technology throughout the curriculum to
   - -personalize learning.
   - -address cognitive, affective, and psychomotor learning.
   - -enhance the creative, problem solving, and critical thinking dimensions of learning.

4. Extend the boundaries of the learning environment.

5. Assess the impact of technology on learning

From these goals, specific measurable objectives have been identified as important indicators of their achievements.

GOAL 1: Enhance the teaching/learning process.

OBJECTIVE 1. By 1993, specify the technological resources that should be available to all students, classrooms, schools, and districts, and which address

- -equipment
- -access (including adapted equipment for students with disabilities)
- -software
- -substantive professional development

OBJECTIVE 2. By 1994, every district will have access to

assistance (human and material) in developing and implementing instructional plans for the use of technology.

OBJECTIVE 3. By 1997, every district will have access to advanced (fiber Optics-based, satellite, etc.) telecommunications, with appropriate equipment for its access in every classroom in Ohio through collaborative efforts.

GOAL 2: Enhance the learning environment.

OBJECTIVE 1. By 1995, teachers and students will be able to use technology to adapt to changing learning designs.

OBJECTIVE 2. By 1995, teachers and students will be able to use technology to facilitate instructional programs that are interdisciplinary in nature.

OBJECTIVE 3. By 1998, teachers and students will be able to use technology to facilitate a shift from learning as simply the assimilation of daya and facts to learning as the construction of knowledge that is meaningful and useful.

GOAL 3: Integrate technology throughout the curriculum.

OBJECTIVE 1. By 1994, teachers and students will be able to use technology to address the fact that human beings possess multiple intelligences, learn differently, at different rates, and in different ways.

OBJECTIVE 2. By 1994, teachers and students will be able to use technology to facilitate multidimensional learning.

GOAL 4: Extend the boundaries of the learning environment.

OBJECTIVE 1. By 1994, use technology to help create an environment that encourages learning beyond the classroom and beyond the institutional setting.

GOAL 5: Assess the impact of technology on learning.

OBJECTIVE 1. By 1993, a formative assessment effort will help determine whether educational technology is being used effectively to enhance the learning environment.

OBJECTIVE 2. By 1998, the impact of technology-enhanced learning systems will be judged in terms of such indicators of learner competence as:

* the ability to access interrelated information;
* the ability to focus upon the underlying principles and patterns needed to solve problems;
* the capacity to know the conditions that mediate the use of knowledge;
* the ability to integrate basic component skills into total performance;
* the ability to monitor understanding, use strategies to make questions comprehensible, evaluate relevance of accessible knowledge, and verify solutions;
* enthusiasm of learners;
* the empowerment of learners to establish a different relationship with information.

PROFESSIONAL DEVELOPMENT GOALS, OBJECTIVES, AND STRATEGIES

Teachers who never heard a radio until they were grown up have to cope with children who have never known a world without television. Teachers who struggled in their childhood with a buttonhook find it difficult to describe a buttonhook to a child bred up among zippers.

Faced with this unwieldy circumstance that the modern teacher becomes not more but, in a sense less fitted to teach, the longer she teaches, we then, as a society, and particularly as those of our society professionally interested in education have a problem to solve.

-Margaret Mead(1950)

Professional development for educators is imperative if technology is to be effectively used in the teaching/learning process. This professional development should be of two general types, that which is focused on: (1)increasing technical expertise and (2) increasing teachers' and adminstrators' abilities to understand and take advantage of the positive ways technology can change the teaching/learning process.

Increasing technical expertise is an important focus for professional development for educators. Teachers and

administrators are living in a technological world--at least outside the school building. The physical world of most classroom teachers has not changed dramatically in the last four decades--especially when compared medical doctors or secretaries or homemakers or engineers or nearly any other occupation or profession. It is increasingly common to find laser surgery in medicine, word-processing and telecommunications in business offices, compact computing in engineering professions, and microwave technologies at home. Yet, many teachers continue to work in classrooms where chalk and chalkboards are the predominate technology. It is vital that teachers and administrators feel comfortable with technology. They must reach a level of technical competence more in the line with the advances that have been made in other professions. Such expertise is essential if they are going to increase their own productivity and help prepare citizens to live in the new millennium.

The second focus of staff development efforts is more vital than the first. Technology is a great magnifier. It magnifies the inappropriate and harmful as well as the creative, productive, and positive. Tools are neither good nor bad in themselves, it is in the use of technological teaching and learning tools that value judgments are appropriate and necessary. Judgments about how and when, with whom and which tools to use are critical if all students are going to thrive in our increasingly technological society. Educators are under tremendous pressure to use technology "in some way." In response to this pressure, any technology use in the classroom is generally seen as "good." While most teachers in the classroom today did not "struggle with a buttonhook," they did grow up and become teachers prior to the technological revolution. They may be uncomfortable with and not knowledgeable about technology.

Technology can be used in ways that may be inappropriate or counter productive. Current understandings about how human beings construct knowledge, together with the shifts in content priorities brought about by the technology revolution, should guide the use of instructional technology. The quality of education today will ultimately be judged by tomorrow's standards. It is sometimes difficult for adults, especially educators, who have enjoyed success in today's world to understand that the knowledge and skills they possess will be insufficient to thrive in tomorrow's world. Technology renders obsolete some traditional educational objectives, significantly reduces the importance of others, greatly enhances the importance of still others, and creates altogether new objectives which are

important for all learners. While the question of how technology can and should be used in teaching and learning is fundamentally a question about curriculum and instruction, it is even more concerned with professional development related to curriculum and instruction. The following goals provide a clear and direct path to achieving appropriate professional development in a technological age.

PROFESSIONAL DEVELOPMENT GOALS

A professional development plan supporting effective use of technology should:

1. Promote effective, on-going professional development.
2. Use a multilevel approach with statewide, local and regional components.
3. Ensure equitable access to professional development opportunities for all regardless of school district.
4. Require preservice students to have a comprehensive training in applied technology prior to certification.
5. Assess and measure the impact of staff development on effective instructional use of technology.

From these goals, specific measurable objectives have been identified as important indicators of their achievement.

GOAL 1: Promote effective, on-going professional development.

OBJECTIVE 1. By 1993, professional development programs will model correct use of technology.

OBJECTIVE 2. By 1994, job specific professional development can take advantage of the natural setting within the school day.

OBJECTIVE 3. By 1994, professional development will respond to technologically-related needs of individual educators.

OBJECTIVE 4. By 1994, professional development programs will support continuously focused attention to identified elements in an established plan.

OBJECTIVE 5. By 1994, professional development programs will include a variety of incentives/responsibilities for staff to become technologically proficient.

OBJECTIVE 6. By 1995, establish programs to assure continued technical competence for teachers, administrators and others engaged in the educational enterprise.

GOAL 2: Use multilevel approach with statewide, local, and regional components.

OBJECTIVE 1. By 1993, professional development programs will be available on a regional basis.

OBJECTIVE 2. By 1994, professional development will use new and existing delivery systems in a well articulated plan.

OBJECTIVE 3. By 1994, a professional development program will be established to foster collaboration among and between elementary/secondary education and higher education.

OBJECTIVE 4. By 1994, professional development programs will promote and incorporate broadly defined partnerships.

OBJECTIVE 5. By 1995, professional development efforts will include the preparation of a cadre of peer trainers as leaders in extending the boundaries and uses of technology in education.

GOAL 3: Ensure equitable access to professional development opportunities for all regardless of school district.

OBJECTIVE 1. By 1993, develop or identify resources, human and other, for all school districts.

OBJECTIVE 2. By 1997, teachers will have direct access to all identified resources.

GOAL 4: Establish appropriate technology outcomes for preservice teacher education.

OBJECTIVE 1. By 1994, the curriculum and instruction in teacher preparation institutions will be designed to provide appropriate technological experiences.

GOAL 5: Assess and measure the impact of professional development on effective use of technology.

OBJECTIVE 1. By 1993, establish criteria for determining educator proficiency in the use of technology.

OBJECTIVE 2. By 1994, prepare an evaluative instrument or procedure to determine teacher personal involvement with creativity, critical thinking, and problem solving.

OBJECTIVE 3. By 1995, institute a study to ascertain the impact of technology use on the desired shift from teacher a dispenser of knowledge to teacher as facilitator of learning.

ASSESSMENT AND EVALUATION

This state plan for educational technology, as suggested in the INTRODUCTION, is intended to be a dynamic blueprint for systemic change. As such, it must be reviewed, refined, revised, and rewritten as necessary to remain current. This requires that, as a plan, it be examined periodically to determine its continued efficacy and effectiveness. Within the plan, strategies are identified which will determine whether each of the goals and objectives is being achieved in the manner specified and within the time frame indicated. Provisions are made for any necessary adjustments to ensure that technology will be available and effectively used to enhance the teaching/learning process through instruction, staff development, accountability and decision making.

It is equally imperative, however, that the goals themselves be evaluated periodically to determine whether they in fact continue to reflect the mission of education specified in the State Board of Education's *Strategic Plan*. The exponential rate at which new technologies (fiber-optics, virtual reality, artificial intelligence) are becoming available suggests that such examinations need to address a host of issues relative to current development and cost. The proliferation of new knowledge bases about how we learn suggests that examination of the goals and objectives must be conducted in a manner designed to ensure that appropriate measures are used to include these new understandings. Organization theory provides yet another set of criteria against which the effectiveness of the plan must be measured. Recent efforts to better understand how people relate and work together in organizations have produced an important database for accountable decision making. It is imperative, therefore, that considerations about how we learn, what structures promote learning, and what technologies are available to enhance the process, be integrated into a comprehensive assessment of the plan.

Assessment and evaluation then, must be able to generate information useful for making any needed adjustments to the strategies designed to implement the plan, as well as any information necessary to measure the quality and viability of the plan itself. For the many constituencies that have a keen interest in its credibility and success, both purposes are vital. Every effort will be taken to ensure that both needs are addressed, and that all data generated will be used to improve the educational enterprise in Ohio.